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Habitat management for

# ***RING-NECKED PHEASANT***



In Kansas

The ring-necked pheasant was introduced into Kansas by the Kansas Fish and Game Commission in 1905 and 1906 with the stocking of birds in 84 counties. A combination of climatic factors and agricultural land use created ideal habitat for pheasants. Approximately 500,000 pheasants per year have been taken by Kansas hunters since 1958.

The ring-neck occurs on most of the open agricultural areas of the state but the greatest density occurs in the western half. (Fig. 1)

Much excellent habitat that existed in the state has been lost because of recent changes in farming practices, including clean farming and the use of herbicides. Most notable was the loss of conservation reserve lands, as well as the current trend toward larger expanses of fallow and equally large grain fields with little or no permanent cover inter-mixed. The practice of fall tillage of grain fields reduces waste grains and cover that might otherwise have been available to feed pheasants through the critical winter period.

In the spring the males establish territories and defend them fiercely from other males. Each is joined by one to several hens which nest in well concealed shallow depressions where there is grassy or weedy cover about eight inches high. Such cover may be undisturbed residues from the previous growing season or new growth.

Nesting usually commences in mid-April to early May. The average clutch size is 11 eggs and the incubation period is 24 days. If the nest is destroyed in the early stages of incubation, the hen is likely to re-nest, laying fewer eggs. Pheasants raise only one brood a year. Broods of many different sizes may be seen at any one time during the summer because of re-nesting due to destruction of the first nest. This makes some people erroneously conclude that hens raise more than one brood per year.

Survival of chicks is often low, especially among early hatched broods which may be chilled by cold spring rains. Although later broods are smaller, they have a better chance for success. Four or five surviving chicks per hen usually assures a successful hunting season the following autumn.

USDA-Soil Conservation Service, Salina, Kansas



July 1978

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CATALOGING PREP

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Winter is a particularly critical time for pheasants. Food and cover are often unavailable for long periods. Heavy losses may occur during blizzards. After a severe winter, hens in poor condition may produce fewer chicks than normal. The average life span of a pheasant is less than one year although some individuals live longer. Natural mortality is high. Approximately 60 to 70 percent of the birds die and are replaced by young birds each year.

Even with such heavy losses, the recovery of the population is usually rapid if food and cover are adequate.

Predators are often blamed for limiting pheasant populations, but in habitat with sufficient cover, predators usually cannot catch enough pheasants to adversely affect their populations. Good habitat, rather than predator control, is the key to pheasant abundance.

### HABITAT NEEDS

Food--Staple or preferred foods of adult pheasants are farm crops; such as grains, seeds, and tender plants:

Cereal grains such as wheat, corn, milo, oats, and barley--make up over 80 percent of the mature pheasant's diet. Seeds of knotweed, pigweed, Russian thistle, and sunflower are also eaten. Succulent leaves of alfalfa, the clovers, and other forbs are eaten when available. Emergency but not preferred food, includes Russianolive, rose, and other available woody plant fruits.

Pheasant chicks live almost wholly on insects--ants, beetles, caterpillars, and grasshoppers--during summer and fall, but switch to seeds as crops and weeds mature.

Water--Water is essential for pheasant survival. The form in which it is taken apparently does not matter. Dew, succulent fruits, green vegetation, and insects can provide much of this need during periods when open water is unavailable.

Cover--A variety of cover types is necessary to provide "living quarters" for ring-necks.

Winter Cover - Escape Cover - Loafing Cover--Consists of shrubs, shrub and tree combinations, or tall herbaceous vegetation, such as cattails, sweetclover, annual weeds, and tall, warm-season native grasses. Ideally, the choice type of cover will stand up well to heavy snow and be located near a reliable food source. Winter cover is probably the major limiting factor for pheasant populations in Kansas. Areas that contain sand or gravel for grit are beneficial if included in loafing cover.

Nesting Cover - is medium-high herbaceous vegetation of medium density. A stand of warm-season grasses or alfalfa is ideal. Nesting also occurs in wheat fields and weed patches. The area should remain undisturbed between mid-April and mid-June.

Brooding Cover - The ideal site will have a good mixture of weedy or brushy fencerows, grassy odd areas, and crop border of grain. Areas which have insect populations are beneficial for the chicks. Native grass areas located next to shrub or tree plantings are good brooding sites. Brooding cover may be a limiting factor in intensively farmed areas.

Roosting Cover - Consists of medium or tall herbaceous vegetation, including annual weeds, alfalfa, and small-grain stubble during snow-free months. Sunflowers, tall annual weeds, and tall emergent aquatic vegetation provide the best roosting cover during the winter.

### HABITAT MANAGEMENT SUGGESTIONS

The most practical and achievable means for meeting ring-neck habitat requirements is through the maintenance and improvement of existing habitat, especially establishment of new areas of permanent vegetation for brood and winter cover.

Every farming operation is different, and no single solution exists to increase pheasant numbers on all areas. The following are some suggestions that should increase pheasant numbers without disrupting normal farming operations.

1. Develop Cover--Establish native grass and scattered shrubs around tailwater recovery pits, along fencerows, field corners of dryland fields, old buildings, corners of center pivot sprinkler systems, and other sites. These areas will generally provide needed brooding and winter cover.
2. Tillage--Refrain from fall tilling of grain stubble since it provides a food source and some cover to pheasants through the critical winter period. Chemical fallow may be used to control weeds in lieu of tillage. Limit tillage to undercutting implements in order to keep from burying straw, grain, and other seed.
3. Shelterbelts and Field Windbreaks--Establish and maintain shelterbelts and windbreaks. In addition to meeting their primary conservation objectives, they can provide winter cover and food for pheasants.
4. Use Caution With Insecticides--Avoid spraying with insecticides during the month of June, unless necessary to save a crop. By delaying spraying, young pheasants are insured an adequate insect supply during their first and second weeks of life. Use all insecticides with caution and in accordance with label instructions and current regulations.
5. Avoid Burning and Discing Mid-April to Mid-June--This period is during the nesting season and loss of nesting vegetation will reduce pheasant numbers.

6. Mowing--When mowing alfalfa or other hay crops during the nesting season, mow from the center of the field toward the edges. Although loss of pheasants and nests will still occur, this practice will tend to push some of the birds to the safety of field edges. Flushing bars can further reduce losses. Postpone mowing until after June 15 if possible. Leaving unmowed strips around the edge of the field can also help. Generally, the majority of nests will be established within 50 feet of the field edge.

#### AREAS SUITABLE FOR HABITAT DEVELOPMENT

The range of a pheasant is quite small when their year-round needs are considered. For this reason, all types of cover and food should be duplicated as many times as possible on any farm unit to achieve highest pheasant populations. A balanced habitat contains food and cover in close proximity to each other. A pheasant must find food and cover close together, during periods of stress, in order to survive.

Many species of grasses and shrubs are suitable for habitat planting to provide the necessary cover.

The Soil Conservation Service, local conservation districts, the Kansas Fish and Game Commission, and the Kansas State Extension Service offer competent guidance on soil, water, plants, and wildlife habitat management.

### KANSAS

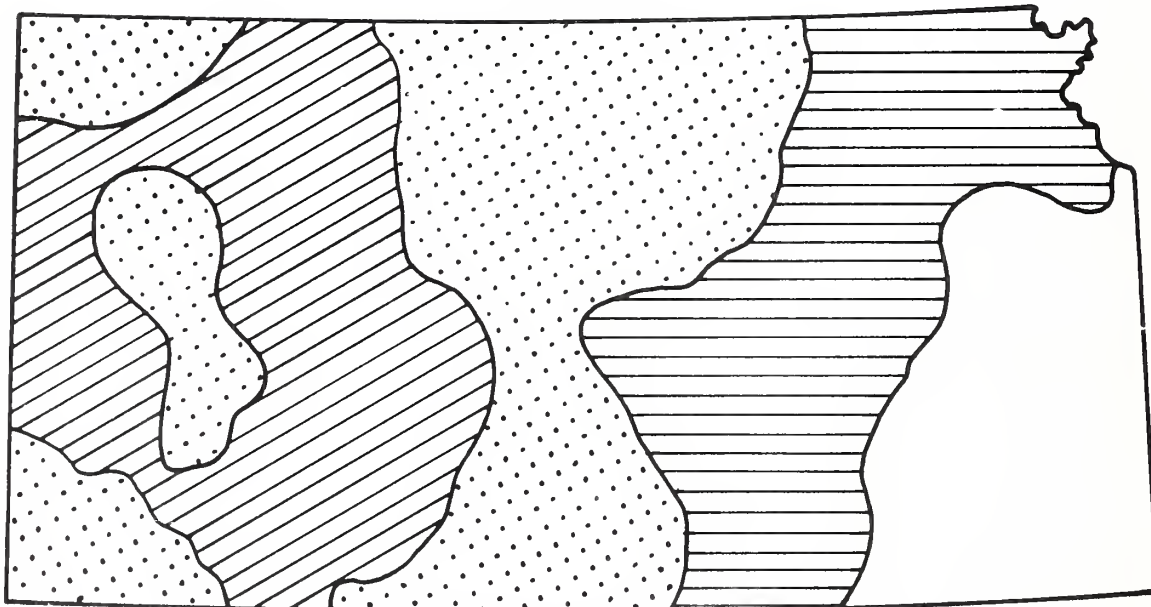


Figure 1.

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#### GENERAL DENSITY DISTRIBUTION OF RING-NECKED PHEASANT

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